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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,554	01/15/2004	Hideaki Yoshida	108201-00014	3042

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WASHINGTON, DC 20036

EXAMINER
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JOHNSON, VICKY A

ART UNIT	PAPER NUMBER
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3682

DATE MAILED: 07/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/757,554	Applicant(s) YOSHIDA, HIDEAKI	
	Examiner Vicky A. Johnson	Art Unit 3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 1-12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Specification***

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because the abstract exceeds 150 words. Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 6-8, 11, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Rattunde (US 4,631,042).

Rattunde discloses a belt type continuously variable transmission comprising a variable width drive pulley (24, 25), a variable width driven pulley (26, 27), and a V belt (34), which is disposed around said drive and driven pulleys (see Fig 2); wherein: a contour of a contact surface being in contact with said V belt in a cross-sectional view through axes of said drive and driven pulleys is an arc that has a first radius of curvature  $r_p$  and is convex to said V belt (see Fig 2); a contour of a contact surface being in contact with said drive and driven pulleys in a cross-sectional view perpendicular to a longitudinal direction of said V belt is an arc that has a second radius of curvature  $r_e$  and is convex to the contact surface of said drive and driven pulleys (see Fig 2); and a contact point moving on the contact surfaces of said drive and driven pulleys and said V belt for a speed ratio change satisfies the following equation:  $\Delta l_e \Delta l_p = r_e / r_p$  the  $\Delta l_p$  being a distance over which said contact point migrates in the cross-sectional view through the axes of said drive and driven pulleys, and the  $\Delta l_e$  being a distance over which said contact point migrates in the cross-sectional view perpendicular to the longitudinal direction of said V belt (It is inherent that the ratio of the distances of the pulley and element over which the contact point migrates will be equal to the ratio of the radius of the pulley and the elements).

Re claim 2, the center  $O_p$  of the arc having said first radius of curvature  $r_p$ , which forms the contact surface in contact with said V belt in the cross-sectional view through the axes of said drive and driven pulleys, is positioned away from the axes of said drive and driven pulleys (see Fig 5).

Re claim 3, said center  $O_p$  is positioned on another side across the axes of said drive and driven pulleys opposite to a side of the contact surface in contact with said V belt (see Fig 4).

Re claim 6, wherein: ratio of the radius of curvature  $r_e$  of said V belt to the radius of curvature  $r_p$  of said drive and driven pulleys satisfies the following equation:  
 $0.02 < r_e/r_p < 0.12$  (col. 3 lines 47-51).

Re claim 7, wherein: the center  $O_p$  of the arc having said first radius of curvature  $r_p$ , which forms the contact surface in contact with said V belt in the cross-sectional view through the axes of said drive and driven pulleys, is positioned away from the axes of said drive and driven pulleys (see Fig 5).

Re claim 8, wherein: said center  $O_p$  is positioned on another side across the axes of said drive and driven pulleys opposite to a side of the contact surface in contact with said V belt (see Fig 5).

Re claim 11, wherein: said contact surfaces are configured such that the center of said V belt in its longitudinal direction is always perpendicular to the axes of said drive and driven pulleys irrespective of speed change condition (see Fig 2).

Re claim 12, wherein: said drive pulley comprises a drive side stationary pulley half, which is disposed axially immovable on a drive shaft, and a drive side movable pulley half, which is disposed on said drive shaft and axially movable with respect to said drive side stationary pulley half; said driven pulley comprises a driven side stationary pulley half, which is disposed axially immovable on a driven shaft, and a

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driven side movable pulley half, which is disposed on said driven shaft and axially movable with respect to said driven side stationary pulley half; said drive side stationary pulley half and said driven side movable pulley half are positioned to overlap each other in a direction perpendicular to the axes of said drive and driven pulleys; and said drive side movable pulley half and said driven side stationary pulley half are positioned to overlap each other in the direction perpendicular to said axes (see Fig 2).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4, 5, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rattunde (US 4,631,042) in view of Drees et al (US 6,652,403).

Rattunde discloses the transmission as described above, but does not disclose the V belt comprising a plurality of elements the V belt comprises a plurality of elements, which are connected in series, and a ring, which is placed on saddle faces of said elements; and the center Oe of the arc having said second radius of curvature re, which forms the contact surface in contact with said drive and driven pulleys in the cross-sectional view perpendicular to the longitudinal direction of said V belt, is positioned away from upper ends of said saddle faces.

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Drees et al disclose the V belt comprises a plurality of elements (2), which are connected in series, and a ring, which is placed on saddle faces of said elements; and the center  $O_e$  of the arc having said second radius of curvature  $r_e$ , which forms the contact surface in contact with said drive and driven pulleys in the cross-sectional view perpendicular to the longitudinal direction of said V belt, is positioned away from upper ends of said saddle faces (see Fig 4), and the center  $O_e$  is positioned away upward from the upper ends of said saddle faces (see Fig 4).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the transmission of Rattunde to include the V-belt as taught by Drees et al in order to eliminate misalignment.

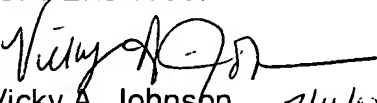
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vicky A. Johnson whose telephone number is (571) 272-7106. The examiner can normally be reached on Monday-Friday (7:00a-3:30p).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6217. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Vicky A. Johnson 7/16/04  
Primary Examiner  
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